

Application Serial No. 10/670,223

Attorney Docket No. 088473-0145

REMARKS

Applicant requests favorable reconsideration of this application in view of the foregoing amendments and the following remarks. Of claims 3, 4, 7, and 10, which were pending in the application, claim 3 remains withdrawn from consideration and claims 4, 7, and 10 were rejected in the Office Action. By way of this amendment, Applicant has amended claims 4, 7, and 10, which are respectfully presented for further consideration, with claim 3 remaining withdrawn from consideration.

1. Information Disclosure Statements

Applicant continues to respectfully request an indication that the Examiner considered (by way of Examiner initials) each of the references listed on the Form PTO/SB/08 submitted with the Information Disclosure Statement filed on February 5, 2004.

3. Rejection of Claims 4, 7, and 10 under 35 U.S.C. § 102(b)

The Examiner rejected claims 4, 7, and 10 under 35 U.S.C. § 102(b) as allegedly being anticipated by either of U.S. Patent No. 6,066,072 ("Adachi") and U.S. Patent Application Publication No. 2002/0052265 ("Segawa"). For at least the following reasons, Applicant respectfully traverses both of these § 102(b) rejections.

As amended, claim 4 recites a system for controlling a hydraulic pressure of an automatic transmission. The system includes, among other possible things (*italic emphasis added*):

- a torque converter comprising a lockup clutch, the lockup clutch carrying out direct coupling between an engine and the transmission;
- a lockup solenoid valve that provides a signal pressure for controlling engagement of the lockup clutch;
- a lockup control valve that provides an engagement pressure to the lockup clutch in accordance with the signal pressure, the lockup control valve comprising a spool; and
- a control unit that controls the lockup solenoid valve, *the control unit being programmed to control the signal pressure to hold the engagement of the lockup clutch, when the spool of the lockup control valve is stationary in an axially movable position between two fully biased positions and the signal pressure is at a maximum value.*

Similarly, amended claim 7 recites an automatic transmission that includes, among other possible things (*italic emphasis added*):

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- a torque converter comprising a lockup clutch, the lockup clutch carrying out direct coupling between an engine and the transmission;
- a lockup solenoid valve that provides a signal pressure for controlling engagement of the lockup clutch;
- a lockup control valve that provides an engagement pressure to the lockup clutch in accordance with the signal pressure, the lockup control valve comprising a spool; and
- a control unit that controls the lockup solenoid valve, *the control unit being programmed to control the signal pressure to hold the engagement of the lockup clutch, when the spool of the lockup control valve is stationary in an axially movable position between two fully biased positions and the signal pressure is at a maximum value.*

Moreover, amended claim 10 similarly recites a method of controlling a hydraulic pressure of an automatic transmission, which transmission includes, among other possible things: (a) a torque converter comprising a lockup clutch, the lockup clutch carrying out direct coupling between an engine and the transmission; (b) a lockup solenoid valve that provides a signal pressure for controlling engagement of the lockup clutch; and (c) a lockup control valve that provides an engagement pressure to the lockup clutch in accordance with the signal pressure, the lockup control valve comprising a spool. This method includes, among other possible steps (*italic emphasis added*):

controlling the signal pressure to hold the engagement of the lockup clutch, when the spool of the lockup control valve is stationary in an axially movable position between two fully biased positions and the signal pressure is at a maximum value.

As hereafter explained, neither Adachi nor Segawa teaches or suggests: (a) the system recited in claim 4; (b) the automatic transmission recited in claim 7; or (c) the method recited in claim 10.

The instant invention maintains the spool 120 at an intermediate position (which is shown in Figs. 5A and 5B) when the signal pressure is maximized, to address a potential problem identified in the prior art, i.e., a possible deterioration in the pressure-control stability of the lockup solenoid due to surging line pressure. See, e.g., ¶ [0006], [0054]-[0056]. In other words, by maintaining the spool in the intermediate position, the lockup control valve is configured to absorb surges in line pressure.

In contrast to the instant invention, neither Adachi nor Segawa expressly teaches maintaining the spool in a stationary position between two fully biased positions, while the lockup clutch is engaged, as previously recited in claims 4, 7, and 10. However, to expedite prosecution Applicant has opted to define more clearly that which was previously recited. Specifically, as above-italicized, claims 4, 7, and 10 now additionally recite that the control

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unit is configured to maintain the spool of the lockup control valve "in an axially movable position between two fully biased positions" when "*the signal pressure is at a maximum value.*" Clearly, neither Adachi nor Segawa teaches or suggests maintaining the spool in an intermediate position when the lockup clutch is engaged and the signal pressure is at a maximum value.

As neither Adachi nor Segawa teaches or suggests at least the above-italicized limitations of claims 4, 7, and 10, neither of the references can be used to reject these claims under 35 U.S.C. § 102(b). Accordingly, a withdrawal of the rejection of claims 4, 7, and 10 is both warranted and respectfully requested.

CONCLUSION

For the aforementioned reasons, claims 4, 7, and 10 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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